

Strategic Freight Transportation Analysis

Presentation
to
SFTA Steering Committee

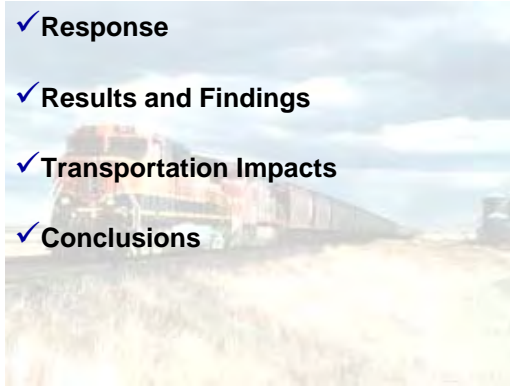
***“Transportation Characteristics of the
Washington Fruit and Vegetable Industry”***

Ryan Herrington
Research Assistant

Eric Jessup
Assistant Professor, Washington State University

Outline.....

- ✓ Study Objectives
- ✓ Survey Specifics
- ✓ Response
- ✓ Results and Findings
- ✓ Transportation Impacts
- ✓ Conclusions



Objectives

- ✓ Collect industry information.
- ✓ Compile current list of apple packers and shippers, to participate in a survey.
- ✓ Design a survey in order to capture information concerning the timing, size, origins, destinations, routes, and shipping characteristics of Washington apple movements.
- ✓ Identify key routes for the distribution and collection of apples.
- ✓ Build Transportation Optimization Model in order to assess different shipping alternatives and the impact on shippers/infrastructure.

Collecting Information

- ✓ Packing Sheds were targeted for the survey. The first challenge was obtaining a mailing list of packing houses in Washington. The list was compiled through correspondence with the following organizations & individuals:
 - ✓ Department of Agriculture
 - ✓ Wenatchee Valley Traffic Association
 - ✓ Yakima Valley Growers and Shippers
 - ✓ WSU Faculty
 - ✓ Fresh Fruit Buyers & Shippers
 - ✓ The Northwest Horticultural Council
 - ✓ The Washington Apple Commission
- ✓ A total of 61 sheds were identified through the correspondence with the organizations listed. Each Shed was contacted prior to mailing the surveys to request their participation in the study.

Collecting Information

- ✓ The survey along with a return envelope and letter further explaining the purpose and goal of the survey were mailed to Apple Packing sheds late in December of 2002 and surveys were collected through mid February.
- ✓ Survey Collection
 - ✓ Initial Survey Mailed, return envelope enclosed First Week
 - ✓ Follow up Letter mailed Second Week
 - ✓ Second Follow up letter mailed Third Week
 - ✓ Those yet to respond were called Fourth Week
 - ✓ Set up on-site interviews Fifth Week

Contact was maintained, phone and on-site interviews were conducted throughout the duration of the collection period.

Collecting Information

Sample Page 1 of 6

Transportation of Apples into this Facility:

- 1) For a typical year, please estimate the annual volume of apples shipped into this facility. _____ Tons per year.
- 2) Please estimate the typical percentage of apples shipped into this facility for the following months in a typical year.

a) January - March	_____	%
b) April - June	_____	%
c) July - September	_____	%
d) October - December	_____	%
Total	100	%
- 3) Approximately what percentage of apples utilized by this facility is shipped into the location by the following transportation modes?
 Truck _____ % Rail _____ % Other _____ %
- 4) Approximately what percentage of apples utilized at this facility is received from the following areas in a typical year?

a) Less than 5 mile radius	_____	%
b) 6 to 10 mile radius	_____	%
c) 11 to 25 mile radius	_____	%
d) 26 to 50 mile radius	_____	%
e) Greater than 50 miles	_____	%
Total	100	%
- 5) What local and Washington state roads are utilized most frequently to transport apples into this facility (For example: I-82, US 395 and Wheeler Road)?

The survey asked information on the following items:

- ✓ Timing of shipments into and from the facility.
- ✓ Mode of transportation used for shipments to and from the facility.
- ✓ Distance from Collection site to facility.
- ✓ Roads used for Collection and Distribution.
- ✓ Quantities shipped to major marketing areas.
- ✓ The survey also requested qualitative data on rail service.

Survey Response

- **In Total we received 29 completed surveys from different locations.**
- **Information on 1,019,000 tons of apples was collected. This represents approximately 40% of the volume relative to total production in 2001.**

Improving the Response Rate

• Timing

- June is ideal time to survey this industry.

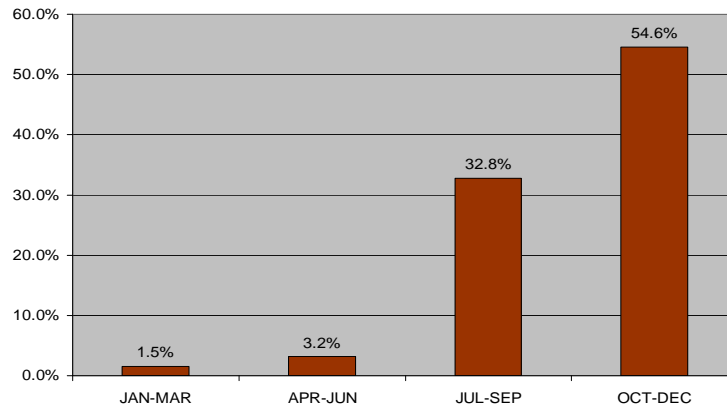
• Improve initial list

- Heavier focus on Apple Marketing firms.

• # 1 reason firms did not want to respond

- Unwilling to share proprietary information, despite guarantee of confidentiality.
- Firms were especially unwilling to share information concerning final markets.

Timing of Shipments into Apple Packing Facilities



Note: Percentages do not total up to 100% because one or more firms did not respond to the question.

Modal Shares of Shipments into Packing Facility

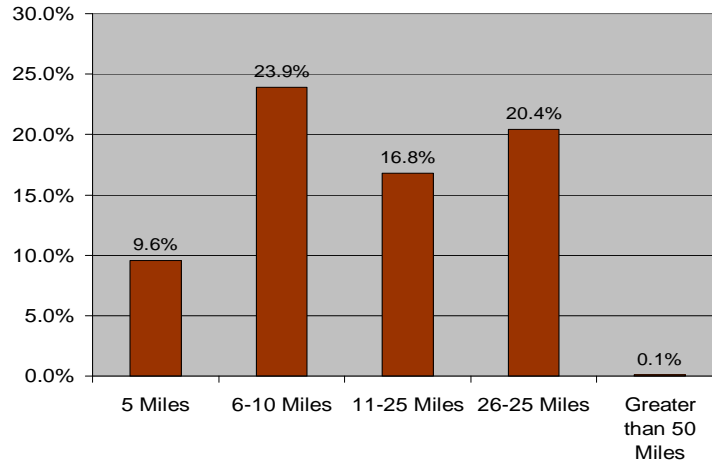
Truck	Rail	Other
98.6%	0.4%	0.8%

As might be expected, Trucks are the preferred choice for the transport of apples into the packing facility.

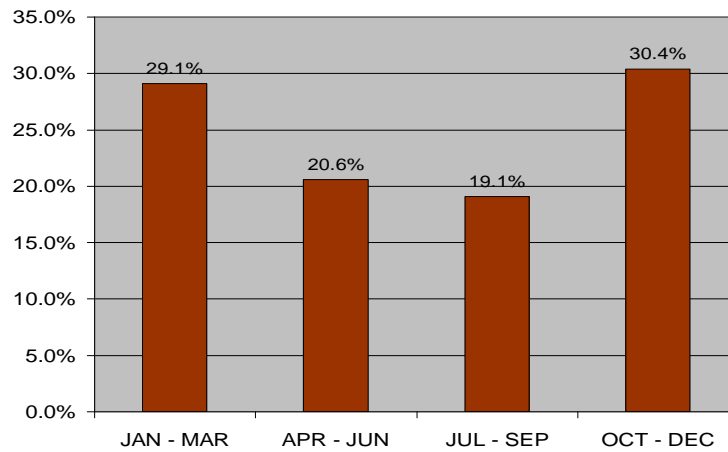
Only one firm listed “other” as a significant mode for receiving apples. Two firms listed occasional rail usage for receiving apples on site.

60% of packing sheds did not have a rail siding on location, 37% had on site rail access, and 3% did not respond.

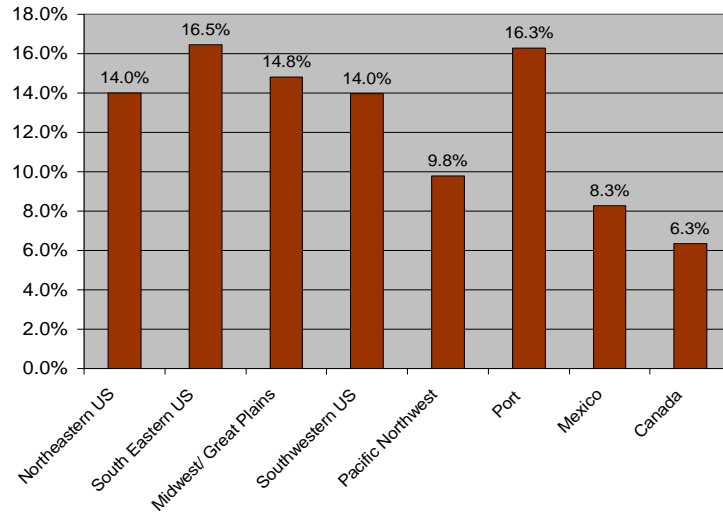
Distance from Harvest Area to Packing Shed



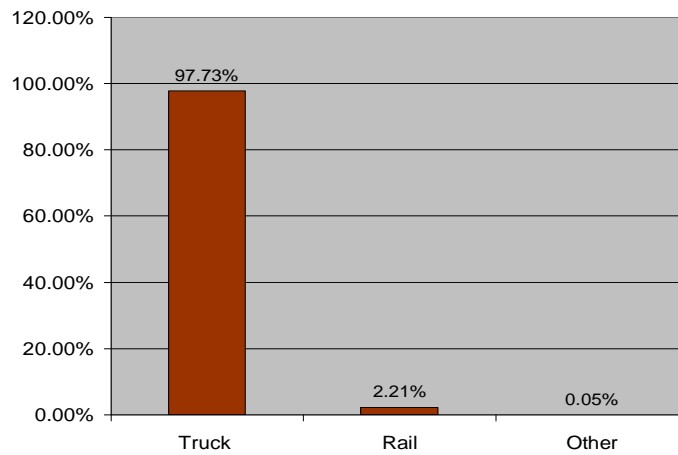
Timing of Shipments from Apple Packing Facilities



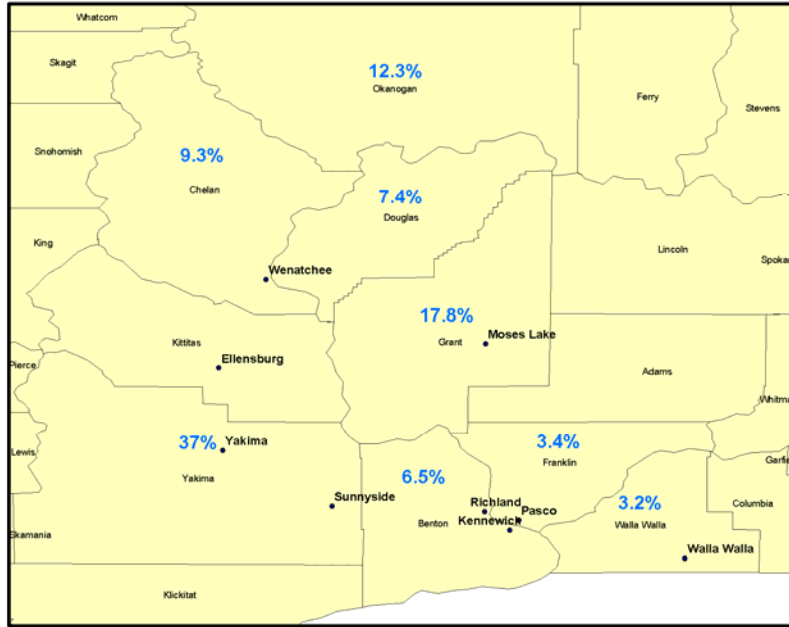
Major Marketing Regions for Washington Apples



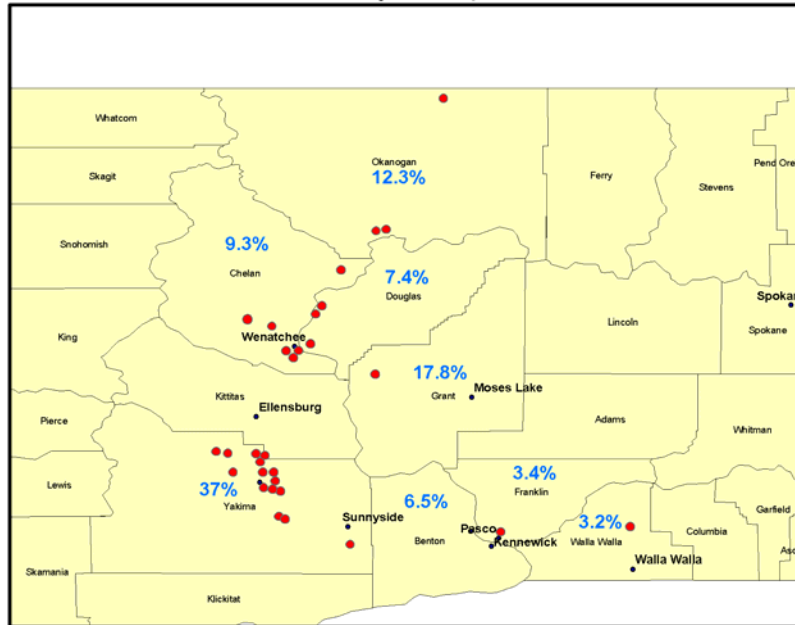
Modal Shares for Shipments to Market



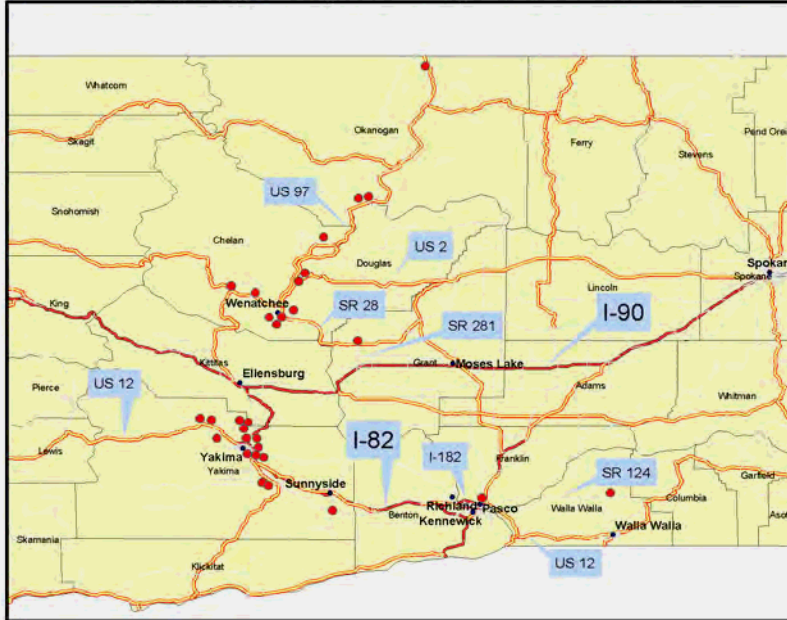
Primary Apple Production Counties



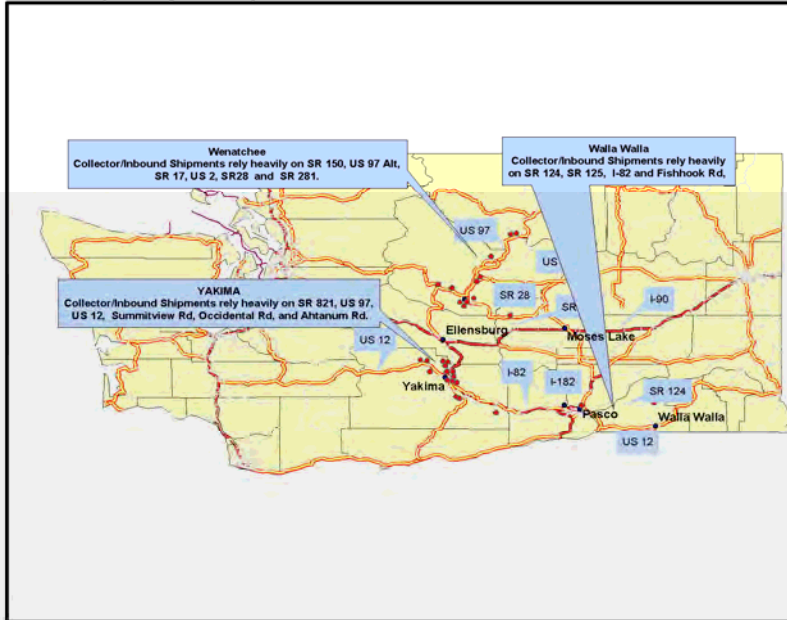
Location of Survey Respondent Facilities



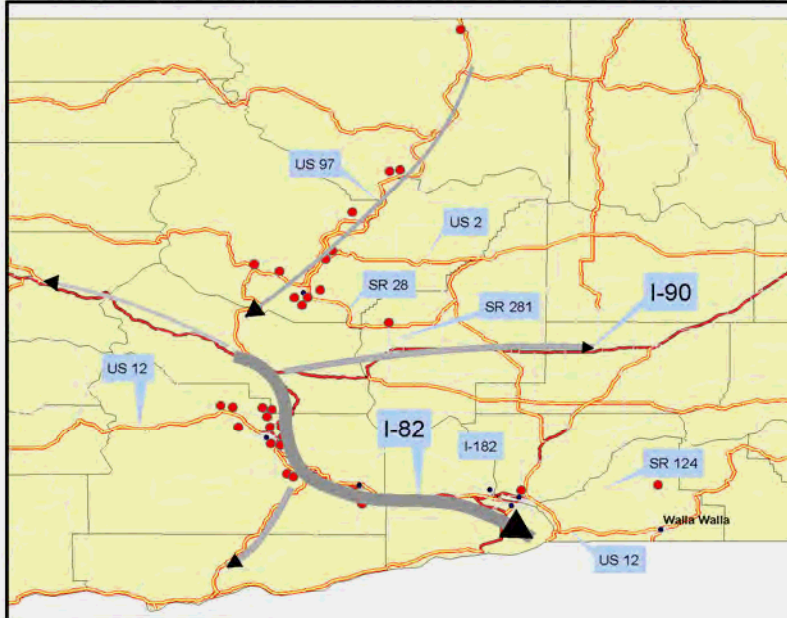
Key Highways for Apple Movements



Key Highways for Inbound Apple Shipments



Key Highways for Outbound Apple Shipments



Conclusions

- **Steady decline in rail usage for Apple shipments over the last 8 years.**
 - Increased demand among shippers for reliability, timeliness, and accessibility.
- **Extensive growth in Walla Walla County**
 - Production has nearly quadrupled in the last 10 years.
 - Increased stress on the SR124, and I82 corridors.
- **Key corridors for apples are US97, and I82.**
 - Significant volume is transported over I90 for export, and distribution in Western Washington.



Website: www.sfta.wsu.edu